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DART AEROSPACE LTD	Work Order:	22023
Description: Doubler	Part Number:	D3144-119
Dwg: D3144 Rev. B page 5 04.12.01 KJ/RF	Qty:	10
		Page 1 of 1

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler	KJ	04.12.08	10
2	PG	Issue P/O: <u>7007542</u> Email or Ship DXF file to vendor Laser Cut D3144-119 flat pattern per Dwg D3144 Possible Supplier: GFI or Industrial Laser Material release note is required			
3	RG	Receive and Inspect for transit damage Ensure material release note is attached	CD	05/03/01	10
4	QC6	Inspect dimensions as per Dwg D3144	RF	05.03.10	10
5	GA	Deburr			
6	FP	Chemical Conversion Coat per QSI 005 4.1	ML	05.04.15	10
7	FP	Powder Coat Black Sandtex (Ref: 4.3.5.7) per QSI 005 4.3	MTFF	05/04/25	10
8	QC3	Inspect Powder Coat	ML	05/04/25	10
9	ST	Identify and Stock	ML	05-04-25	10
10	AC	Cost / part: <u>21.21</u>	SC	05-04-26	10
11	DC	Close W/O <u>21.29</u> Inspect Level 21	KJ	05.04.29	10

Rev	Date	Change	Revised By	Approved
A	04.11.29	New issue	KJ/RF	<u>✓</u>

RELEASED
05/04/29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____

PAR #: _____

Fault Category: _____

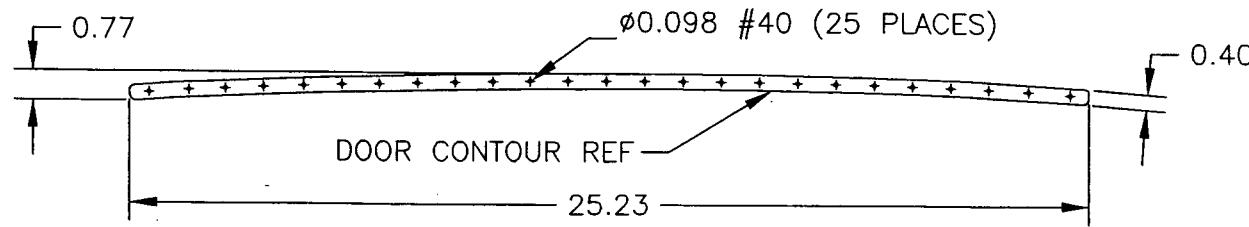
NCR: Yes No DQA: _____

Date: _____

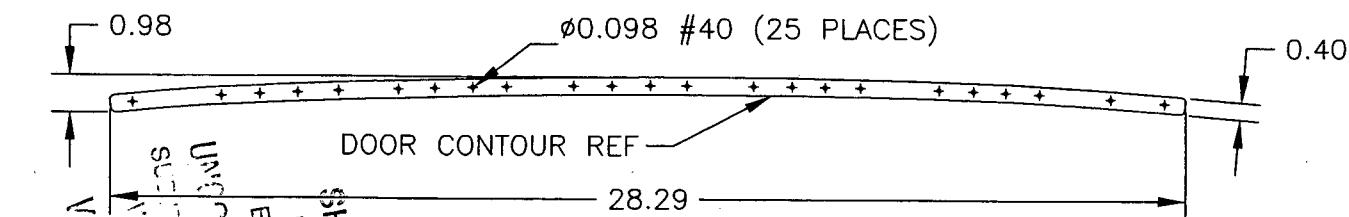
NOTE: Date & initial all entries

QA: N/C Closed: _____

Date: _____



D3144-119 DOUBLER (FOR D412-694-04)



D3144-123 DOUBLER (D412-694-02)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
NO. 22023

D3144-119/-123 NOTES:

- 1) MATERIAL: 2024-T3 SHEET (QQ-A-250/4) 0.032 THICK (REF DART SPEC M2024T3S.032)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT BLACK SANTEX (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 6) MACHINE PER DRAWING FILE "D3144-B5.DWG"

DESIGN	DRAWN BY	DART AEROSPACE LTD
PH	PH	HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
PH	PH	D3144
DATE		SHEET 5 OF 9
04.09.17	TITLE	SCALE
	DOUBLER	NTS

DART

© COPY IS
DRAFT

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Dec 06, 2004
11:09 am

Work Order No : 0022023
 Project Name : D3144-119
 Project For : WK452
 Work Order Type : Main
 Main WO Number :
 House Part Number : D3144-119
 Description : Doubler
 Manufactured : Yes
 Amount Req'd : 10
 Amount Done : 0
 Start Date : 12-03-04
 Est Finish Date : 12-21-04
 Act Finish Date :
 Drawings Reqd : No
 Ok for Approval :
 Approval Rec'd : \$0 Posted to Finished Goods

Department Code:
 Burden Flags : NNNNNNN
 WO Status : Open
 Invoice State : Not Invoiced
 Invoice Date :
 Invoice Number :
 Invoice Amount : 0.00

Order Entry No :
 OE Value : 0.00

Est Margin : 0.000%
 Actual Margin : 0.000%

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00	0.00	0.00
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00	0.00	0.00
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00	0.00	0.00
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00	0.00	0.00
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00	0.00	0.00
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00	0.00	0.00
Misc. :	0.00	0.00	0.00	0.00	0.00
=====					
Burden :	0.00	0.00	0.00	0.00	0.00
=====					
Total Cost :	0.00	0.00	0.00	0.00	0.00
Margin :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/ (Loss) :	0.00	0.00



Membre de / A Member of **Thomas & Betts**

180 LABROSSE AVENUE
POINTE CLAIRE, QC
H9R 1A1

CERTIFICATE OF COMPLIANCE

CERTIFICAT DE CONFORMITE

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7

CERTIFICATE NO. **1** OUR JOB NO **J0124331** SHIPPING MEMO **0292747**

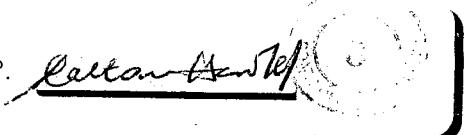
ITEM	QUANTITY	PURCHASE ORDER	PART NUMBER	REV	NAME	DWG ISSUE
--	10 PCS	2007542	D3144-119		DOUBLER	B
MATERIAL		SUPPLIED BY			MAT. REL. NO.	
AL 2024-T3 (QQ-A-250/4)		SAMUEL / KAISER ALUMINUM			226511 ATT'D	

	PROCESS	PROCESSOR	RELEASE NOTE #
1			
2			
3			
4			
5			
6			
7			
8			
9			

WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE **24 FEBRUARY 2005**

G.F.I. Q.C. REP.



007-05

**LES MÉTAUX
SPÉCIALISÉS**
SAMUEL

Programme d'Assurance Qualité Enregistré / Registered Q.A. Program
ISO 9001:2000 AS9100

LETTRE DE CONFORMITÉ –LETTER OF COMPLIANCE

Date: 7 JANVIER 2005

Company Name: G.F.I. Division of Thomas & Betts, Limited
Address: 180 avenue Labrosse
City: Pointe Claire, Qué.
Zip Code: H9R 1A1

du client: 0058243 **# de commande SSMQ:** 834566
Customer's order #: SSMQ's Order #:

La présente est pour certifier que le matériel détaillé ci-dessous est conforme aux exigences de votre commande et des normes du grade tel que décrit:

The following is to certify that the material listed below meets your order requirements and grade standards as described:

Notre/Our Item #	# de pièces/ # of pieces	Épaisseur/Grandeur Guage/Size	Alliage/Trempe Alloy/Temper	Spécification / Specification	Lot/Heat
2	2	.032" x 48" x 144"	2024 T3	AMS-QQ-A-250/4	226511

Bien à vous,
Yours truly,

Joni Basmadjian

Commis à l'administration.
Administration Clerk.



SHIP TO:
 LES METAUX SPECIALISES SAMUEL
 (SHIP TO)
 21525 CLARK GRAHAM
 BAIE D'URFE, PQ, CA H9X3T5

SOLD TO:
 SAMUEL SON & CO LTD
 2225 FRANCIS HUGHES
 LAVAL, PQ, CA H7S1N5

KAISER
ALUMINUM

Trentwood Works - Spokane, WA 99215
 Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
 4011938

CUSTOMER PO NUMBER:		CUSTOMER PART NUMBER:		SHIPPING RUN #/LOAD ID:		GOVT CONTRACT NUMBER:	
N16221				100089/2			
KAISER ORDER NO:	LINE ITEM:	SHIP DATE:		ALLOY:	CLAD:	TEMPER:	
1008983	1	9-JUL-2004		2024	BARE	T3	
WEIGHT SHIPPED:	QUANTITY:	B/L NUMBER:		GAUGE:	WIDTH:	LENGTH:	
3928 LB	173 PCS EST.	202031		0.0320 IN	48.00 IN	144.000 IN	

Certified Specifications

AMS 4037/RevN

AMS-QQ-A-250/4/RevA

ASTM B 209/Rev04

Test Code: 1504

Test Results

Lot: 226511 Cast

Drop

Ingot

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T3	LT / 2 (Min:Max)	67.4 : 67.6 (465 : 466)	45.2 : 45.3 (312 : 312)	17.8 : 18.3
Chemistry:	Si	FE	CU	MN	MG
Actual	0.08	0.22	4.46	0.55	1.32
				CR	ZN
				0.01	0.17
				TI	0.01
				V	0.01
				ZR	0.00
				TOT	0.06

ALLOY LIMITS

Chemistry:	Si	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
2024 MIN	0.00	0.00	3.80	0.30	1.20	0.00	0.00	0.00	0.00	0.00	EACH	0.05
MAX	0.50	0.50	4.90	0.90	1.80	0.10	0.25	0.15	0.05	0.05	TOT	0.15

Aluminum Remainder

CERTIFICATION

KAISER ALUMINUM & CHEMICAL CORPORATION (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772 (MIL-H-6088). ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR

